

CLAIMS

1.

A telechelic polyolefin, which is represented by the following general formula (I):



wherein X and Y are each a group containing at least one element selected from oxygen, sulfur, nitrogen, phosphorus and halogens, X and Y may be the same or different, P represents a chain made mainly of an olefin composed only of carbon and hydrogen atoms, and X and Y are bonded to both terminals of P, wherein the molecular weight distribution (Mw/Mn) obtained by gel permeation chromatography (GPC) is from 1.0 to 1.5.

2.

~~The telechelic polyolefin according to claim 1, wherein~~
the polymer chain P is made of units of at least one olefin selected from ethylene and olefins having 3 to 20 carbon atoms.

3.

The telechelic polyolefin according to claim 1 or 2, which is obtained by: performing the following steps 1, 2 and 1 in this order in the presence of an olefin polymerizing catalyst containing a compound (A) which contains a transition metal in the groups IV to V; and subsequently performing the following step 3 if necessary:

[step 1] the step of bringing it into contact with a

polar-group-containing olefin (C) represented by the following general formula (II):



wherein Y' is a group containing at least one element from oxygen, sulfur, nitrogen, phosphorus and halogens, Q is an alkylene group which may have a substituent, a carbonyl group, or bivalent oxygen, A and R each represent a hydrogen atom or a hydrocarbon group which may have a substituent, and A or R may be bonded together to Q to form a ring,

[step 2] the step of bringing the resultant into contact with at least one olefin (D) selected from ethylene and olefins having 3 to 20 carbon atoms n times wherein n is an integer of 1 or more, so as to mix them (provided that when n is an integer of 2 or more, the olefins (D) used in the respective contact operations are different in kind or composition), and

[step 3] the step of chemical conversion.